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Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TECH CENTER 1600/2900 Gr 45

Re: U.S. Utility Patent Application  
Appl. No. 10/067,974; Filed: February 8, 2002  
For: **Polynucleotide Constructs for Increased Lysine Production**  
Inventors: Li *et al.*  
Our Ref: 1533.2640001/MAC/M-G

Sir:

Transmitted herewith for appropriate action are the following documents:

1. Fourth Supplemental Information Disclosure Statement;
2. Form PTO-1449 (8 sheets);
3. Copies of twenty-six (26) cited documents; and
4. One (1) return postcard.

It is respectfully requested that the attached postcard be stamped with the date of filing of these documents, and that it be returned to our courier. In the event that extensions of time are necessary to prevent abandonment of this patent application, then such extensions of time are hereby petitioned.

Commissioner for Patents

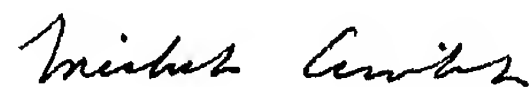
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Page 2

The U.S. Patent and Trademark Office is hereby authorized to charge and credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michele A. Cimbala  
Attorney for Applicants  
Registration No. 33,851

Enclosures

SKGF\_DC1:140234.1



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Li *et al.*

Appl. No. 10/067,974

Filed: February 8, 2002

For: **Polynucleotide Constructs for  
Increased Lysine Production**

Confirmation No. 3799

Art Unit: 1645

Examiner: *To Be Assigned*

Atty. Docket: 1533.2640001/MAC/M-G

**Fourth Supplemental Information Disclosure Statement**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98. The numbering on this Fourth Supplemental Information Disclosure Statement is a continuation of the numbering in Applicants' Second Supplemental and Third Supplemental Information Disclosure Statements filed October 31, 2002 and herewith, respectively, in connection with the above-captioned application. A copy of each document is also provided.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

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This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits. No statement or fee is required.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered. This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist.

Consideration of the cited documents and making the same of record in the prosecution of the above-identified application is respectfully requested. The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.



Michele A. Cimbala  
Attorney for Applicants  
Registration No. 33,851

Date: June 3, 2003

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FORM PTO-1449  FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 1533.2640001/MAC/M-G	APPLICATION NO. 10/067,974
	APPLICANT Li et al.	
	FILING DATE February 8, 2002	GROUP 1645

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
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## FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN1	WO 96/34961	11/07/1996	WIPO			Yes No
	AO1	EP 0 754 756	01/22/1997	Europe			Yes No
	AP1	EP 0 854 189	07/22/1998	Europe			Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR		
	AS	15	Archer, J.A.C., and Sinskey, A.J., "The DNA sequence and minimal replicon of the <i>Corynebacterium glutamicum</i> plasmid pSR1: evidence of a common ancestry with plasmids from <i>C. diphtheriae</i> ," <i>J. Gen. Microbiol.</i> 139:1753-1759, The Society for General Microbiology (1993)
	AT	15	Ben-Samoun, K., et al., "Positively regulated expression of the <i>Escherichia coli</i> araBAD promoter in <i>Corynebacterium glutamicum</i> ," <i>FEMS Microbiol. Lett.</i> 174:125-130, Elsevier Science B.V. (1999)

EXAMINER	DATE CONSIDERED
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EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL2	EP 1 108 790	06/20/2001	Europe			Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	16	Jobling, M.G., and Holmes, R.K., "Construction of vectors with the p15a replicon, kanamycin resistance, inducible lacZ $\alpha$ and pUC18 or pUC19 multiple cloning site," <i>Nucl. Acids Res.</i> 18:5315-5316, IRL Press (1990)
	AS	16	Kleeman, A., et al., "Amino Acids," in <i>Ullmann's Encyclopedia of Industrial Chemistry, Fifth, Completely Revised Edition, Volume A 2: Amines, Aliphatic to Antibiotics</i> , Gerhartz, W., ed., VCH Verlagsgesellschaft mbH, Weinheim, Germany, pp.57-97 (1985)
	AT	16	Lonsdale, D.M., et al., "pFC1 to pFC7: A Novel Family of Combinatorial Cloning Vectors," <i>Plant Mol. Biol. Report.</i> 13:343-345, Transaction Periodicals Consortium, Rutgers University (1995)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

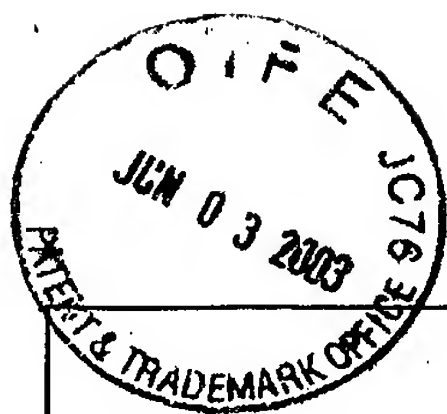
	AR	17	Marcel, T., et al., "Nucleotide sequence and organization of the upstream region of the <i>Corynebacterium glutamicum</i> lysA gene," <i>Mol. Microbiol.</i> 4:1819-1830, Blackwell Scientific Publications (1990)
	AS	17	Nakayama, K., et al., "Microbial Production of Essential Amino Acids with <i>Corynebacterium glutamicum</i> Mutants," in <i>Nutritional Improvement of Food and Feed Proteins</i> , Freidman, M., ed., Plenum Press, New York, NY, pp. 649-661 (1977)
	AT	17	Oguiza, J.A., et al., "A Gene Encoding Arginyl-tRNA Synthetase Is Located in the Upstream Region of the <i>lysA</i> Gene in <i>Brevibacterium lactofermentum</i> : Regulation of <i>argS-lysA</i> Cluster Expression by Arginine," <i>J. Bacteriol.</i> 175:7356-7362, American Society for Microbiology (1993)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>18</u>	Pátek, M., et al., "Promoters from <i>Corynebacterium glutamicum</i> : cloning, molecular analysis and search for a consensus motif," <i>Microbiology</i> 142:1297-1309, The Society for General Microbiology (1996)
	AS	<u>18</u>	Pátek, M., et al., "Identification and transcriptional analysis of the <i>dapB</i> -ORF2- <i>dapA</i> -ORF4 operon of the <i>Corynebacterium glutamicum</i> , encoding two enzymes involved in L-lysine synthesis," <i>Biotechnol. Lett.</i> 19:1113-1117, Chapman Hall (1997)
	AT	<u>18</u>	Pharmingen "pPMG-LIC Bacterial Cloning Vector," in 1999 <i>Research Products Catalog</i> , Pharmingen, San Diego, CA, p. 839 (1999)

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	FILING DATE February 8, 2002	GROUP 1645

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	AP						Yes No

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>19</u>	Record, Jr., M.T., et al., "Escherichia coli RNA Polymerase (Eo <sup>70</sup> ), Promoters, and the Kinetics of the Steps of Transcription Initiation," in <i>Escherichia coli and Salmonella, Cellular and Molecular Biology, Second Edition, Volume I</i> , Neidhardt, F.C., et al., eds., ASM Press, Washington, DC, pp.792-821 (1996)
	AS	<u>19</u>	Reinscheid, D.J., et al., "Cloning, sequence analysis, expression and inactivation of the <i>Corynebacterium glutamicum</i> pta-ack operon encoding phosphotransacetylase and acetate kinase," <i>Microbiology</i> 145:503-513, The Society for General Microbiology (1999)
	AT	<u>19</u>	Schäfer, A., et al., "Small mobilizable multi-purpose cloning vectors derived from the <i>Escherichia coli</i> plasmids pK18 and pK19: selection of defined deletions in the chromosome of <i>Corynebacterium glutamicum</i> ," <i>Gene</i> 145:69-73, Elsevier Science B.V. (1994)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	20	Serebrijski, I., et al., "Multicopy Suppression by asd Gene and Osmotic Stress-Dependent Complementation by Heterologous proA in proA Mutants," <i>J. Bacteriol.</i> 177:7255-7260, American Society for Microbiology (1995)
	AS	20	Serwold-Davis, T.M., et al., "Transformation of <i>Corynebacterium diphtheriae</i> , <i>Corynebacterium ulcerans</i> , <i>Corynebacterium glutamicum</i> , and <i>Escherichia coli</i> with the <i>C. diphtheriae</i> plasmid pNG2," <i>Proc. Natl. Acad. Sci. USA</i> 84:4964-4968, National Academy of Sciences (1987)
	AT	20	Van Walsem, H.J., and Thompson, M.C., "Simulated moving bed in the production of lysine," <i>J. Biotechnol.</i> 59:127-132, Elsevier Science B.V. (1997)

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## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR	<u>21</u>	Wendisch, V.F., et al., "Regulation of acetate metabolism in <i>Corynebacterium glutamicum</i> : transcriptional control of the isocitrate lyase and malate synthase genes," Arch. Microbiol. 168:262-269, Springer-Verlag (1997)
	AS	<u>21</u>	Database EMBL Acc. No. Z21502, Pisabarro, A., et al. (August 16 1993)
	AT	<u>21</u>	Database EMBL Acc. No. AX122246, Nakagawa, S., et al. (May 11, 2001)

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	AR	<u>22</u>	Database EMBL Acc. No. AX123535, Nakagawa, S., et al. (May 11, 2001)
	AS	<u>22</u>	Database EMBL Acc. No. AX125746, Nakagawa, S., et al. (May 10, 2001)
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